

The National Orthodox School/ Shmessani

Subject: Science/ Physics

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Lab report: Density Assignment

Date: *31/10/2022*

Grade-Section: *8 H. CS*

**Title:** in few words, write a title that describes what you are aiming to determine with this experiment.

*Investigating the density of different materials.*

**Objective:** why are you conducting this experiment?

*To find the density of all the objects by finding their volume and mass.*

**Hypothesis:** what do you think the results will be when you conduct the experiment?

*That I will observe a change in Density when the object used is changed.*

**Materials:** write down the items you will need to conduct this experiment.

1. Mass Balance or Scale
2. Volumetric Cylinder
3. Ruler
4. Water

*These are what we would usually use in the lab but since we are doing this remotely the simulation will have everything you need.*

**Procedure:** list the steps will you take to conduct this experiment.

*Visit the website by using the link below to use the simulation to solve the following.*

Simulation Link

[https://phet.colorado.edu/sims/html/density/latest/density\\_en.html](https://phet.colorado.edu/sims/html/density/latest/density_en.html)

*By using the toolbox on the top right-hand side, play around with **“same mass, same volume and same density”**, feature to get familiar with it.*

*After getting familiar with it, change the toolbox on the right-hand side, to the **mystery option**.*

*Try to find the density of all the objects by finding their volume and mass. Use the table below the toolbox on the right-hand side to figure out which object with each letter was which material. **Write the results in table 1***

Note:

*To interact with the blocks, you just have to click and drag them, be careful not to stack them on top of each other.*

*Also, if the blocks float on water you can keep pressing them and just pull them all under the water in order to find the volume*

**Observation:** What data did you collect in this experiment?

(5 marks)

Table 1

Letter	Mass of the object (kg)	Volume of the object (L)	Density of the object (kg/L)	Material of the object (use the table given)
A	<i>19.3</i>	<i>5.5</i>	<i>3.51</i>	<i>Diamond</i>
B	<i>0.4</i>	<i>1</i>	<i>0.4</i>	<i>Wood</i>
C	<i>19.32</i>	<i>1</i>	<i>19.32</i>	<i>Gold</i>
D	<i>5</i>	<i>5</i>	<i>1</i>	<i>water</i>
E	<i>2.8</i>	<i>7</i>	<i>0.4</i>	<i>Wood</i>

(5 marks)

Table 2

	Mass of the object (kg)	Volume of the object (L)	Density of the object (kg/L)	Material of the object
1.	01.23	3.14	<i>0.39</i>	<i>Wood</i>
2.	03.60	3.91	<i>0.92</i>	<i>Ice</i>
3.	10.00	3.703	<i>2.70</i>	<i>Glass</i>
4.	02.69	0.3	<i>8.97</i>	<i>Copper</i>

**Conclusion:** What conclusion or theory can you state regarding this experiment?

*You could know what object you are looking for when you find the density.*